

User Manual



EUROLIVE PROFESSIONAL

B2520 PRO

High-Performance 2,200-Watt PA Loudspeaker System with Dual 15" Woofers

B1800X PRO

Professional 1,800-Watt 18" PA Subwoofer

B1520 PRO/B1220 PRO

Professional 1,200-Watt 15"/12" PA Loudspeaker System

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Thank you

By purchasing BEHRINGER EUROLIVE PROFESSIONAL speakers, you have obtained a first-class PA loudspeaker system. Now, you own (at least) one component of an expandable system that will reproduce the sound of your musical material unadulterated and perfectly balanced.

EN Important Safety Instructions



Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock. Use only high-quality commercially-available speaker cables with ¼" TS plugs pre-installed. All other installation or modification should be performed only by qualified personnel.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.



Caution

To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.



Caution

To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.



Caution

These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Use only attachments/accessories specified by the manufacturer.



12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid

injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



Legal Disclaimer

Technical specifications and appearance are subject to change without notice. The information contained herein is correct at the time of printing. All trademarks are the property of their respective owners. MUSIC Group accepts no liability for any loss which may be suffered by any person who relies either wholly or in part upon any description, photograph or statement contained herein. Colors and specifications may vary slightly from product. BEHRINGER products are sold through authorized dealers only. Distributors and dealers are not agents of MUSIC Group and have absolutely no authority to bind MUSIC Group by any express or implied undertaking or representation. This manual is copyrighted. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording of any kind, for any purpose, without the express written permission of MUSIC Group IP Ltd.

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Road Town, Tortola, British Virgin Islands

Limited Warranty

§ 1 Warranty

1 This limited warranty is valid only if you purchased the product from a BEHRINGER authorized dealer in the country of purchase. A list of authorized dealers can be found on BEHRINGER's website behringer.com under "Where to Buy", or you can contact the BEHRINGER office closest to you.

2 MUSIC Group* warrants the mechanical and electronic components of this product to be free of defects in material and workmanship if used under normal operating conditions for a period of one (1) year from the original date of purchase (see the Limited Warranty terms in § 4 below), unless a longer minimum warranty period is mandated by applicable local laws. If the product shows any defects within the specified warranty period and that defect is not excluded under § 4, MUSIC Group shall, at its discretion, either replace or repair the product using suitable new or reconditioned product or parts. In case MUSIC Group decides to replace the entire product, this limited warranty shall apply to the replacement product for the remaining initial warranty period, i.e., one (1) year (or otherwise applicable minimum warranty period) from the date of purchase of the original product.

3 Upon validation of the warranty claim, the repaired or replacement product will be returned to the user freight prepaid by MUSIC Group.

4 Warranty claims other than those indicated above are expressly excluded.

PLEASE RETAIN YOUR SALES RECEIPT. IT IS YOUR PROOF OF PURCHASE COVERING YOUR LIMITED WARRANTY. THIS LIMITED WARRANTY IS VOID WITHOUT SUCH PROOF OF PURCHASE.

§ 2 Online registration

Please do remember to register your new BEHRINGER equipment right after your purchase at behringer.com under "Support" and kindly read the terms and conditions of our limited warranty carefully. Registering your purchase and equipment with us helps us process your repair claims quicker and more efficiently. Thank you for your cooperation!

§ 3 Return materials authorization

1 To obtain warranty service, please contact the retailer from whom the equipment was purchased. Should your BEHRINGER dealer not be located in your vicinity, you may contact the BEHRINGER distributor for your country listed under "Support" at behringer.com. If your country is not listed, please check if your problem can be dealt with by our "Online Support" which may also be found under "Support" at behringer.com. Alternatively, please submit an online warranty claim at behringer.com BEFORE returning the product. All inquiries must be accompanied by a description of the problem and the serial number of the product. After verifying the product's warranty eligibility with the original sales receipt, MUSIC Group will then issue a Return Materials Authorization ("RMA") number.

② Subsequently, the product must be returned in its original shipping carton, together with the return authorization number to the address indicated by MUSIC Group.

③ Shipments without freight prepaid will not be accepted.

§ 4 Warranty Exclusions

① This limited warranty does not cover consumable parts including, but not limited to, fuses and batteries. Where applicable, MUSIC Group warrants the valves or meters contained in the product to be free from defects in material and workmanship for a period of ninety (90) days from date of purchase.

② This limited warranty does not cover the product if it has been electronically or mechanically modified in any way. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship. This limited warranty does not cover any such modification/adaptation, regardless of whether it was carried out properly or not. Under the terms of this limited warranty, MUSIC Group shall not be held responsible for any cost resulting from such a modification/adaptation.

③ This limited warranty covers only the product hardware. It does not cover technical assistance for hardware or software usage and it does not cover any software products whether or not contained in the product. Any such software is provided "AS IS" unless expressly provided for in any enclosed software limited warranty.

④ This limited warranty is invalid if the factory-applied serial number has been altered or removed from the product.

⑤ Free inspections and maintenance/repair work are expressly excluded from this limited warranty, in particular, if caused by improper handling of the product by the user. This also applies to defects caused by normal wear and tear, in particular, of faders, crossfaders, potentiometers, keys/buttons, guitar strings, illuminants and similar parts.

⑥ Damage/defects caused by the following conditions are not covered by this limited warranty:

- improper handling, neglect or failure to operate the unit in compliance with the instructions given in BEHRINGER user or service manuals;
- connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used;
- damage/defects caused by acts of God/Nature (accident, fire, flood, etc) or any other condition that is beyond the control of MUSIC Group.

⑦ Any repair or opening of the unit carried out by unauthorized personnel (user included) will void the limited warranty.

⑧ If an inspection of the product by MUSIC Group shows that the defect in question is not covered by the limited warranty, the inspection costs are payable by the customer.

⑨ Products which do not meet the terms of this limited warranty will be repaired exclusively at the buyer's expense. MUSIC Group or its authorized service center will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 6 weeks after notification, MUSIC Group will return the unit C.O.D. with a separate invoice for freight and packing. Such costs will also be invoiced separately when the buyer has sent in a written repair order.

⑩ Authorized BEHRINGER dealers do not sell new products directly in online auctions. Purchases made through an online auction are on a "buyer beware" basis. Online auction confirmations or sales receipts are not accepted for warranty verification and MUSIC Group will not repair or replace any product purchased through an online auction.

§ 5 Warranty transferability

This limited warranty is extended exclusively to the original buyer (customer of authorized retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of MUSIC Group.

§ 6 Claim for damage

Subject only to the operation of mandatory applicable local laws, MUSIC Group shall have no liability to the buyer under this warranty for any consequential or indirect loss or damage of any kind. In no event shall the liability of MUSIC Group under this limited warranty exceed the invoiced value of the product.

§ 7 Limitation of liability

This limited warranty is the complete and exclusive warranty between you and MUSIC Group. It supersedes all other written or oral communications related to this product. MUSIC Group provides no other warranties for this product.

§ 8 Other warranty rights and national law

① This limited warranty does not exclude or limit the buyer's statutory rights as a consumer in any way.

② The limited warranty regulations mentioned herein are applicable unless they constitute an infringement of applicable mandatory local laws.

③ This warranty does not detract from the seller's obligations in regard to any lack of conformity of the product and any hidden defect.

§ 9 Amendment

Warranty service conditions are subject to change without notice. For the latest warranty terms and conditions and additional information regarding MUSIC Group's limited warranty, please see complete details online at behringer.com.

* MUSIC Group Macao Commercial Offshore Limited of Rue de Pequim No. 202-A, Macau Finance Centre 9/J, Macau, including all MUSIC Group companies

1. Introduction

Thanks to its numerous features, the EUROLIVE PROFESSIONAL SERIES is the ideal PA loudspeaker system: it is equally well-suited both for small gigs and large stages. We have brought it to life in order to offer you a complete range of loudspeaker choices. In doing so, we have left open all the options for expanding your PA system. All loudspeakers feature professional inputs and outputs (compatible to Neutrik Speakon), letting you flexibly expand your setup whenever you need to.

- ◆ The following instructions are intended to familiarize you with the specialized terminology used throughout this user's manual, so that you can master all the functions. After having thoroughly read the user's manual, store it in a safe place for future reference.

1.1 Before you get started

1.1.1 Shipment

Your EUROLIVE speakers were carefully packed at the assembly plant to assure secure transport. Should the condition of the cardboard box suggest that damage may have taken place, please inspect the unit immediately and look for physical indications of damage.

- ◆ Damaged units should NEVER be sent directly to us. Please inform the dealer from whom you acquired the unit immediately as well as the transportation company from which you took delivery of the unit. Otherwise, all claims for replacement/repair may be rendered invalid.
- ◆ Please always use the original packaging to avoid damage due to storage or shipping.
- ◆ Never let unsupervised children play with the EUROLIVE speakers or their packaging.
- ◆ Please dispose of all packaging materials in an environmentally friendly fashion.

1.1.2 Initial operation

Your EUROLIVE speakers are connected to a power amplifier using the speaker connectors located in the back. Please read ch. 5, "Additional Considerations" and ch. 6, "Application Examples" to get important technical information and practical suggestions about use.

- ◆ Always make sure to mute your power amplifier before connecting the speakers.

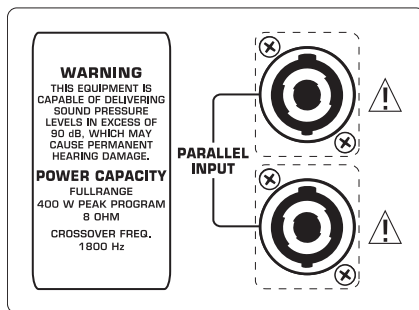


Fig. 1.1: B1520 PRO connector panel (B2520PRO/B1220 PRO's are similar)

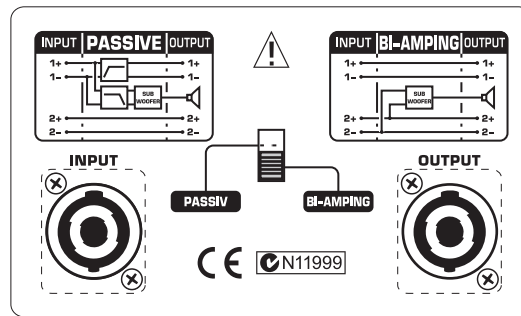


Fig. 1.2: Subwoofer connector panel (B1800X PRO)

The EUROLIVE PROFESSIONAL SERIES features professional speaker connectors (compatible to Neutrik Speakon) that assure problem-free operation. The Speakon connector was developed for loudspeakers with high power ratings. If it is connected into the corresponding plug, it locks into place and cannot accidentally be disconnected. It protects against electric shock and assures correct polarity. Each of the plugs only carries the assigned individual signal (see table 4.1/ Fig. 1.3 and the insignia on the back of the unit).

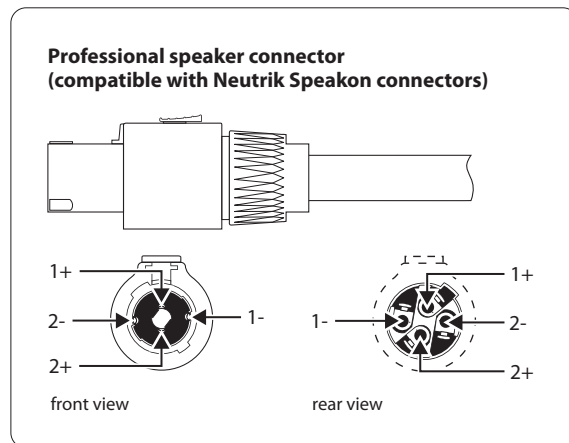


Fig. 1.3: Speaker connector

Please only use the commercially available Speakon cables (type NL4FC) to connect your loudspeakers to the power amp. Verify the pin assignment of your loudspeakers and cables depending on the loudspeaker output you are using.

1.1.3 Online registration

Please register your new BEHRINGER equipment right after your purchase by visiting <http://behringer.com> and read the terms and conditions of our warranty carefully.

Should your BEHRINGER product malfunction, it is our intention to have it repaired as quickly as possible. To arrange for warranty service, please contact the BEHRINGER retailer from whom the equipment was purchased. Should your BEHRINGER dealer not be located in your vicinity, you may directly contact one of our subsidiaries. Corresponding contact information is included in the original equipment packaging (Global Contact Information/European Contact Information). Should your country not be listed, please contact the distributor nearest you. A list of distributors can be found in the support area of our website (<http://behringer.com>).

Registering your purchase and equipment with us helps us process your repair claims more quickly and efficiently.

Thank you for your cooperation!

1.2 User manual

This user's manual is structured in such a way to give you an overview about the application options of your EUROLIVE PROFESSIONAL speakers, giving you at the same time important information about optimizing your PA system. Should you require detailed explanations about specific subjects, please visit us on the internet at behringer.com.

2. Optimal Operation

We have developed the EUROLIVE PROFESSIONAL SERIES for use in a wide range of possible applications. Of course, the sound of your loudspeakers depends on the acoustic characteristics of the room/space in which they are being used. The following chapters of this manual will give you information about getting the most out of your EUROLIVE speakers.

2.1 HF drivers

High frequencies are the segment of the audio spectrum responsible for clarity and speech intelligibility. These frequencies are the easiest ones to locate, but at the same time they are also the easiest ones to "obstruct." Therefore, we recommend positioning your speakers so that the HF drivers are located slightly above the height of the audience. This guarantees the best possible dispersion of high frequencies and a considerably higher intelligibility.

2.1.1 Directional pattern of asymmetrical HF drivers

An outstanding feature of the B1220 PRO, B1520 PRO and the B2520 PRO are their asymmetrically formed horns ("Asymmetrical Dispersion Constant Directivity Horn"). By turning the horns 90°, you can optimize the directional pattern for both vertical and horizontal speaker positioning. The default horn setting is the "front of house" vertical configuration, whereby the wide dispersion side (100°) is pointed downward and the narrow dispersion side (50°) is pointed upward. If you want to position your speaker horizontally (as a "floor" monitor), you can modify the horn position to assure optimal dispersion (turning the horn by 90°). Please do the following:

- 1 Remove the speaker cover by carefully and uniformly pulling off the steel grill.
- 2 Unfasten the four screws with which the horn is mounted.
- 3 Turn the horn 90°, so that the wide dispersion side (100°) points upward when the loudspeaker is lying horizontally on its side.
- 4 Mount the horn back into its place with the four previously unfastened screws.
- 5 Set the grill back into its place and press gently until it snaps into position.

♦ **No warranty claim is valid for damage caused by incorrect handling or flawed and/or careless use.**

2.2 How to prevent feedback

Always place the "front of house" speakers ahead of the microphones (from the audience's perspective), and never behind. Use professional floor monitors (e.g. B1220 PRO, B1520 PRO or B2520 PRO) or an in-ear monitoring system to hear the stage performers.

2.3 How to avoid feedback when working with record players (DJ Applications)

In applications with record players, bass feedback can occur. Bass feedback occurs when low frequencies get back to the pickup and are re-reproduced on the speakers. The most common causes for this are: speakers located too closely to the record player, a room with a wooden floor, or presence of a podium or a platform. In such cases, it is best to move the speakers away from the record

player and "banish" them from the stage, so that they are located on firm ground. Another option is to use raised stands, which prevent the speakers from having a direct contact with the ground.

2.4 Loudspeaker protection by using a low-cut filter

Try to prevent damage to your speakers caused by extreme oscillation of the bass membrane due to subsonic noise and extremely deep frequencies. Use an equalizer to cut off those frequencies that fall below your speakers' frequency range, or use a low-cut/high-pass filter. Most equalizers and sound-improvement systems offer a low-cut function, like the BEHRINGER ULTRAGRAPH DIGITAL DEQ1024, for example.

Using a low-cut filter in your signal path is particularly recommended if you use record players or CD players as your signal source. CD players often produce extremely deep frequencies, which can lead to extreme excursions of the bass membrane.

3. Operating Modes

3.1 BI-AMPING and PASSIVE operation (B1800X PRO)

The EUROLIVE PROFESSIONAL SERIES subwoofer can run in two ways: in PASSIVE and BI-AMPING mode. The B1800X PRO can be switched from BI-AMPING to PASSIVE by using the switch located in the back. For all applications, your EUROLIVE speakers are connected using the speaker inputs.

♦ **Never switch the operating mode if your EUROLIVE speakers are wired to an active signal source.**

The subwoofer features an internal crossover. Running the B1800X PRO in passive mode makes it ideally suited for working together with the 2-way B1220 PRO, B1520 PRO and B2520 PRO systems. This way, you achieve an absolutely balanced sound characteristic. However, if you select the BI-AMPING mode, your subwoofer can be combined with other EUROLIVE 2-way systems. The BI-AMPING operating mode offers several primary advantages: lower distortion, greater flexibility of signal transmission as well as an improved overall performance of your system. The PASSIVE operating mode has the advantage of requiring no additional crossovers in order to keep the subwoofer's frequency range within its limits.

If you are using an external crossover, e.g. the BEHRINGER ULTRADRIVE PRO DCX2496, pay attention to chapter 8, "Specifications." There, you will find information about the recommended crossover frequency range. We recommend a slope rate of at least 12 dB, whereby a higher value guarantees the best possible performance. A slope rate of 24 dB is ideal.

Our recommendations are only examples of possible interactions between different EUROLIVE speakers. Depending on your own personal sound requirements and the genre of the music being played, other combinations are of course possible.

3.2 Looping through the subwoofer signal (B1800X PRO)

The B1800X PRO subwoofer from the EUROLIVE PROFESSIONAL SERIES features two speaker connectors. In BI-AMPING mode, the PINS 2-/2+ of the input are connected directly with the speaker. PINS 1-/1+ of the input are connected to the PINS 1-/1+ of the output and the signal can be simply looped through. To this end, please adhere to the specifications given in chapter 4.

♦ **Please keep in mind that when you switch the B1800X PRO subwoofer to BI-AMPING mode, the input signal is routed to PINS 2-/2+. In this case, PINS 1-/1+ merely serve to loop the signal through!**

3.3 PARALLEL Input (B1220 PRO, B1520 PRO and B2520 PRO)

The EUROLIVE B1220 PRO, B1520 PRO and B2520 PRO loudspeakers feature two speaker inputs laid out in parallel. You can alternatively connect one of the connectors to the output on your power amp and tap into the signal from the amp once again on the second connector, in order to, for example, feed this signal into an additional loudspeaker. This way, you can create stacks consisting of speakers with different impedance values.

⚠ **ATTENTION:** Never connect the output signals of different power amps to both parallel inputs at the same time. This may permanently damage your setup.

4. Pin Assignment (B1800X PRO)

	Subwoofer B1800X PRO	
	PINS 1-/1+	PINS 2-/2+
PASSIVE	INPUT: Full-range input OUTPUT: highpass output	Signal loop
BI-AMPING	Signal loop	Subwoofer input

Tab. 4.1: Pin assignment

4.1 Subwoofer (PASSIVE)

- Feed the full-range signal to the input PINS 1-/1+. The high-pass signal can be tapped into at the output PINS 1-/1+. PINS 2-/2+ serve as a signal loop through.

4.2 Subwoofer (BI-AMPING)

- Connect the subwoofer signal to PINS 2-/2+.
- PINS 1-/1+ of the input are connected to PINS 1-/1+ of the output, and can be used to loop the signal through.
- In general, when in BI-AMPING mode, PINS 1-/1+ and PINS 2-/2+ are looped through.

5. Additional Considerations

5.1 Length and diameter of loudspeaker cables

Loudspeaker cables whose diameter is too small can limit the power amp performance considerably. The longer the cable, the greater the problem. As a result, musicians often simply “turn up” the amp, which can lead to loudspeaker damage. Therefore, don’t use cables longer than 15 m (45 ft.). For most applications, this will not be necessary. Cable diameter should be at least 2.5 - 4.0 mm².

5.2 Power amp rating

Selecting the right amp can turn out to be rather difficult. Therefore, stick to the following rule of thumb: the power rating of your amp should be roughly twice the speaker load capacity. A speaker rated at 400 Watts continuous performance can easily be powered by an amp rated at 800 Watts output power. An optimal addition to your speaker system would be the BEHRINGER EUROPOWER EP2500 power amp, for example.

5.3 Fuses

We do not recommend the use of fuses with audio applications. Damage to loudspeakers can be the result of high peak signals and high output power. However, fuses can only offer protection from one of these two factors, and never from both. Additionally, fuse resistors are sometimes nonlinear, leading to distortion and unpredictable overdriving.

5.3.1 Protecting your equipment

- Always try to find the optimal signal level. Try to avoid overdriving your amp.
 - keep in mind the physical limitations of your PA system.
 - Use a limiter to restrict the output signal level. Place the limiter between the mixing console and the power amp. For this purpose, our proven AUTOCOM PRO-XL MDX1600, COMPOSER PRO-XL MDX2600 and MULTICOM PRO-XL MDX4600 compressors offer an outstanding solution. All models can be used as a limiter: the audio signal doesn’t overdrive any more, and unpleasant “peaks” are effectively avoided.
- ⚠ Our ULTRADRIVE PRO DCX2496 and SUPER-X CX3400/CX2310 crossovers are particularly well-suited for protecting your equipment: for each output, they have independent limiters.

6. Application Examples

6.1 Full-range stereo operation

In the following example, the main stereo output signal of a mixing console is connected to a stereo power amplifier. A B1220 PRO is connected to each of the amp outputs, and these speakers reproduce the entire frequency range (full range).

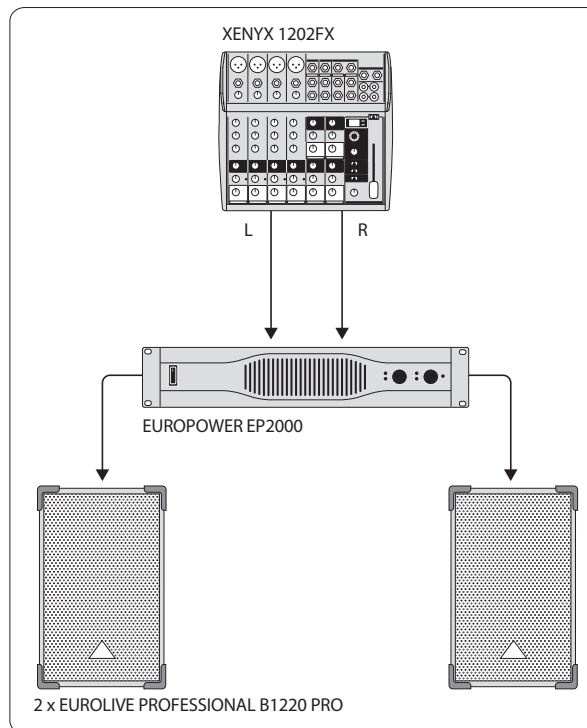


Fig. 6.1: Full-range stereo operation

6.2 Stereo operation with a subwoofer

Using a crossover, the main stereo output signal of a mixing console is split into a stereo signal and a mono signal, whereby the mono signal covers the lower frequency range and the stereo signal carries the rest of the frequencies. Then, the stereo signal is connected to a stereo power amplifier. A B1520 PRO is connected to each of the amp's outputs. The mono subwoofer signal is connected to one channel of an additional power amplifier, which is powering one B1800X PRO subwoofer.

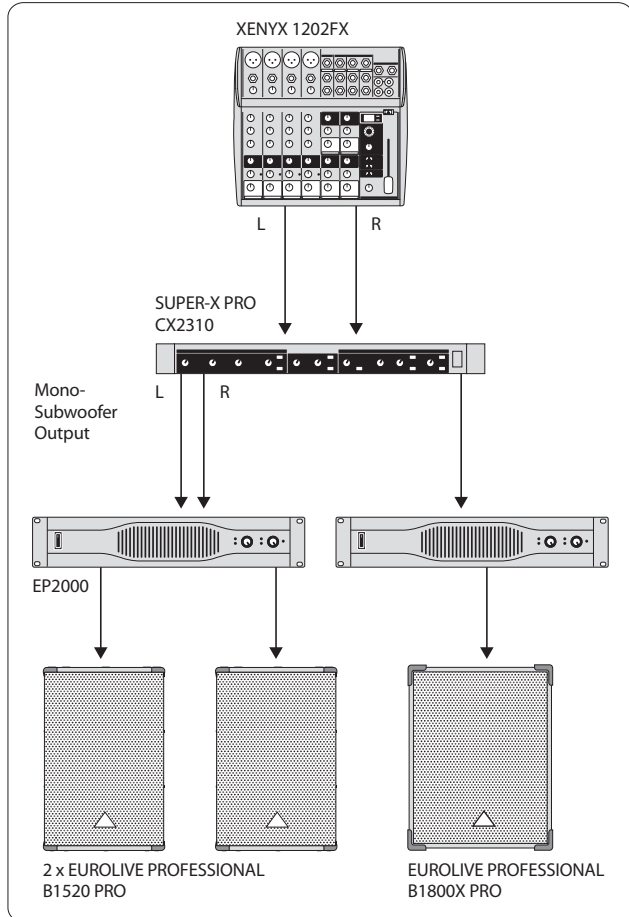


Fig. 6.2: Stereo operation with a subwoofer

6.3 Stereo operation with a parallel stage monitoring system and a subwoofer

This example shows the use of two B1520 PROs as FOH loudspeakers and one B1220 PRO used as a floor monitor on stage. The FOH loudspeakers reproduce the main stereo output signal from the mixing console, while the stage monitor is fed an independent monitor mix through a mono monitor send (Aux Send). A separate subwoofer output feeds a B1800X PRO subwoofer with the bass signal. Two stereo power amps are required for this application, whereby one amp reproduces the main stereo signal, and the other one reproduces both mono signals (subwoofer and monitor signal).

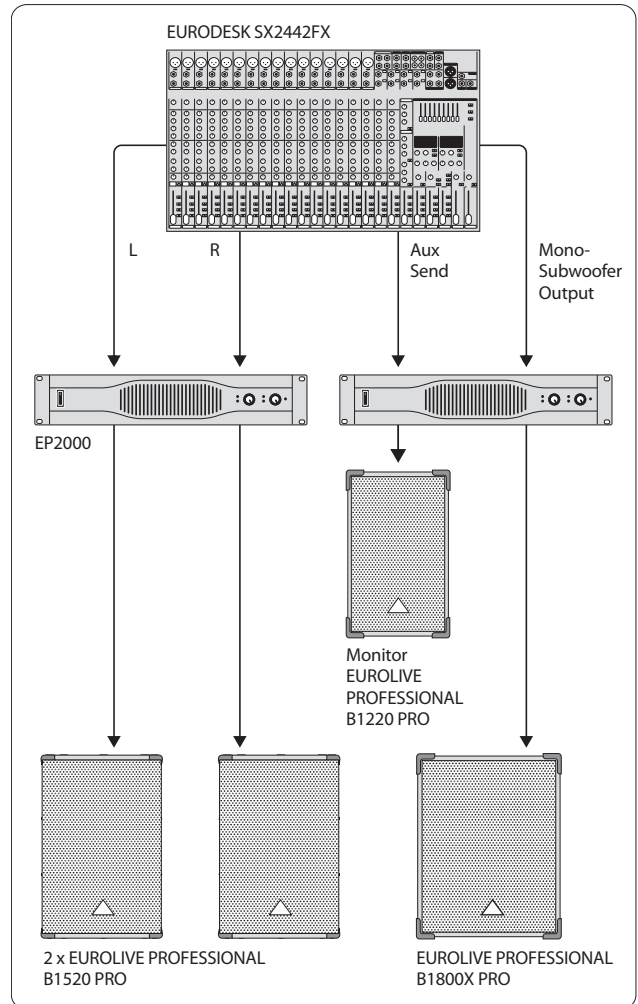


Fig. 6.3: Stereo operation with a parallel stage monitoring system and subwoofer

7. Troubleshooting

7.1 No signal when loudspeaker is connected

- Make sure that your mixing console is indeed carrying a signal (is the master fader raised? Are channels active?) and that the gain control on your amp is turned up.
- When using a crossover, make sure that the relevant channels are active.
- Check if the cable connection is interrupted/damaged somewhere in your setup.
- To test your configuration, connect another amp. If you now get a signal, the power amp is the culprit.
- To test your configuration, connect another speaker. If you now get a signal, the fault lies within the speaker.

7.2 Signal present only on one channel

- Make sure that your mixing console is working properly (is the signal present on both outputs (L/R)?).
- If using a crossover, check if the relevant channel is active.
- Check if the cable connection to the silent channel and to the corresponding speakers is interrupted/damaged somewhere along the path.
- Connect the silent loudspeaker onto the amp channel that works properly. If you now get a signal, it is the amp channel that is at fault. If you still can not hear anything, the fault lies either within the loudspeaker or the cables used.

7.3 Signal distorted

- Make sure that all signals on the mixing console have been set to optimal levels in order to avoid distortion.
- If using a crossover, check if all signals have been set to correct levels.
- Make sure that the power amp channels are not overdriving. If so, turn the gain control down a little. However, it could also be the case that your power amp doesn't have enough power headroom, so that the required volume can not be generated without starting to distort.
- Make sure that the level of the signal getting into the speakers is not too high, causing distortion.
- Check your EQ settings. Excessively increasing the frequencies can result in distortion.
- If distortion is still occurring despite everything you have tried to eliminate it, try connecting a different power amp. If you no longer hear distortion, its cause was with the power amp.
- As a test, connect another speaker. If you no longer hear distortion, its cause was with the loudspeaker (perhaps a defective loudspeaker).
- Check if the cable connection is interrupted/defective somewhere along the path.

7.4 Treble signal too low

- Check the EQ settings on your mixing console or on an external EQ, if applicable.
- Make sure that the tweeters on your loudspeakers are positioned at the same height as the ears of the people in the audience. If not, please modify the speaker position.
- The internal tweeter fuse may have opened. In this case, please contact a BEHRINGER service branch office near you.

7.5 Bass signal too low

- Check the EQ settings on your mixing console or on an external EQ, if applicable.
- Check the speaker cable pin assignment (see fig. 1.3). Incorrect pin assignment can cause phase cancellation and the frequency incursions related to it.

7.6 Poor sound characteristics

- Check the speaker cable pin assignment (see fig. 1.3). Incorrect pin assignment can cause phase cancellation and the frequency incursions related to it.
- Check if large objects (e.g. effect racks and similar equipment) are placed in front of the loudspeakers. They too can negatively influence sound dispersion.
- Check the sound quality of the input signal by listening to it on a set of headphones.
- Also see the instructions in the chapters 7.3, 7.4 and 7.5.

8. Specifications

B2520 PRO

System Data	
Type	2 ½-way full-range speaker (2 x 15" + 1.75")
Frequency response (-10 dB)	50 Hz - 18 kHz
Continuous Power (IEC268-5) ¹	550 W
Peak Power	2200 W
Impedance	4 Ω
Sound pressure level (1 W @ 1 m)	99 dB (Full Space)
Dispersion	100° (50°) x 50°
Crossover frequency	200 Hz / 1.8 kHz
Components	
HF driver	44T30A8
Woofers	2 x 15W250A8
Dimensions/Weight	
Dimensions (W x H x D)	approx. 18 5/16 x 46 21/32 x 19" approx. 465 x 1185 x 482 mm
Weight	approx. 105 lbs / 47.5 kg
BI-Amp Operation	
Recommended crossover frequency (external crossover network)	—
Power rating/impedance woofer	—

B1800X PRO

System Data	
Type	Subwoofer (18")
Frequency response (-10 dB)	40 Hz - 300 Hz
Continuous Power (IEC268-5) ¹	450 W
Peak Power	1800 W
Impedance	8 Ω
Sound pressure level (1 W @ 1 m)	100 dB (Half Space)
Dispersion	—
Crossover frequency	—
Components	
HF driver	—
Woofers	18SW400D8
Dimensions/Weight	
Dimensions (W x H x D)	approx. 21 ½ x 27 5/8 x 21 ¾" approx. 547 x 700 x 553 mm
Weight	approx. 77 ½ lbs / 35 kg
BI-Amp Operation	
Recommended crossover frequency (external crossover network)	175 Hz
Power rating/impedance woofer	450/1800 W IEC/8 Ω

B1520 PRO

System Data	
Type	2-way full-range speaker (15" + 1.75")
Frequency response (-10 dB)	50 Hz - 18 kHz
Continuous Power (IEC268-5) ¹	300 W
Peak Power	1200 W
Impedance	8 Ω
Sound pressure level (1 W @ 1 m)	96 dB (Full Space)
Dispersion	100° (50°) x 50°
Crossover frequency	1.8 kHz

Components	
HF driver	44T30A8
Woofer	15W250A8

Dimensions/Weight	
Dimensions (W x H x D)	approx. 18 5/16 x 27 5/8 x 19" approx. 465 x 700 x 482 mm
Weight	approx. 59 1/2 lbs / 27 kg

BI-Amp Operation	
Recommended crossover frequency (external crossover network)	—
Power rating/impedance woofer	—

B1220 PRO

System Data	
Type	2-way full-range speaker (12" + 1.75")
Frequency response (-10 dB)	55 Hz - 18 kHz
Continuous Power (IEC268-5) ¹	300 W
Peak Power	1200 W
Impedance	8 Ω
Sound pressure level (1 W @ 1 m)	95 dB (Full Space)
Dispersion	100° (50°) x 50°
Crossover frequency	2.5 kHz

Components	
HF driver	44T30A8
Woofer	12W250B8

Dimensions/Weight	
Dimensions (W x H x D)	approx. 15 5/8 x 25 1/8 x 16" approx. 397 x 638 x 406 mm
Weight	approx. 52 7/8 lbs / 24 kg

BI-Amp Operation	
Recommended crossover frequency (external crossover network)	—
Power rating/impedance woofer	—

¹ Average value over bandwidth 100 Hz - 2 kHz (multi-way systems) und 100 Hz - 250 Hz (subwoofer) according to IEC 268-5.

BEHRINGER is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or illustrated.



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